

ABSTRACT OF THE DISCLOSURE

Processes of forming a heat driving part, a membrane, and a nozzle part, and
5 assembling the heat driving part, the membrane, and the nozzle part, sequentially. The nozzle
part assembling process includes (1) laminating the nozzle plate on a substrate, (2) forming the
nozzle on the nozzle plate, (3) forming jetting fluid chambers by extending the nozzle in a
depth direction, and (4) separating the substrate. The nozzle plate is adhered to the substrate,
and the nozzle plate is abraded to have a predetermined thickness after the step (2). Here, the
10 nozzle plate is abraded to have a predetermined thickness by a chemo-mechanical polishing
process, and the nozzle plate is made of a silicon material. Further, the steps (2) and (3) are
carried out through a lithographic process, respectively, and the step (3) is carried out through
an anisotropic etching of the lithographic process. The step (4) is executed after the step of
sequentially assembling the heat driving part, the membrane, and the nozzle part. Accordingly,
since the nozzle and the jetting fluid chambers are integrally formed on one substrate of a
silicon diaphragm, fewer processing operations are required. Further, since a thickness
difference on the whole substrate is minimized, a driving part-membrane assembly on one
substrate may be assembled with the nozzle part on another substrate.